IN THE CLAIMS:

Claims 1-6. (CANCELED)

(Currently amended) 7. A transistor, comprising:

~~an emitter and a collector, or a base made of a transparent~~ an emitter, a collector and a base selected from the group consisting of:

(a) an emitter and a collector made of a transparent n-type semiconductor, and a base made of a transparent p-type semiconductor, and

(b) a base made of a transparent n-type semiconductor, and an emitter and a collector made of a transparent p-type semiconductor,

said n-type semiconductor comprising any one of zinc oxide ZnO, zinc magnesium oxide ~~MgxZn1-xO~~ $Mg_xZn_{1-x}O$, zinc cadmium oxide ~~CdxZn1-xO~~ $Cd_xZn_{1-x}O$ and cadmium oxide CdO, doped with group III elements or group VII elements, and

said transparent p-type semiconductor comprising any one of zinc oxide ZnO, zinc magnesium oxide ~~MgxZn1-xO~~ $Mg_xZn_{1-x}O$, zinc cadmium oxide ~~CdxZn1-xO~~ $Cd_xZn_{1-x}O$ and cadmium oxide CdO, doped with group I elements or group V elements;

and

a base electrode, an emitter electrode and a collector electrode, in which

(1) a transparent conductive material ~~such as conductive ZnO~~ doped or undoped with any one of group III elements, group VII elements and group I elements,

(2) a transparent conductor, ~~such as In2O3, SnO2 and (In-Sn)Ox~~ or

(3) an untransparent electrode material

are used partially or entirely, the base electrode, the emitter electrode and the collector electrode being respectively formed on said base, said emitter and said collector.

8. (Original) A semiconductor device, comprising:

the transistor according to claim 7; and

a light emission portion formed of a region continuous to said collector or said emitter of said transistor or a region of another semiconductor connected to said collector or said emitter,

and a semiconductor layer joined to said region.

9. (Original) A semiconductor device, comprising:

the transistor according to claim 7, and a capacitor formed of a region continuous to said collector and said emitter of said transistor or a region of another semiconductor or a conductor connected to said collector or said emitter, an insulating layer on said region, and a semiconductor layer or a conductive layer on said insulating layer.

Claims 10-12. (CANCELED)

13. (Previously presented) A semiconductor device, comprising a plurality of transistors according to claim 7, and an insulating layer, said insulating layer is between transistors of said plurality of transistors;

wherein said insulating layer comprises a transparent insulating material including at least one of insulative ZnO doped with elements capable of taking a valence of one as a valence number or group V elements, a transparent insulating oxide, and a transparent insulator.

14. (Currently amended) A semiconductor device, comprising:

a plurality of transistors according to claim 7; and

wiring between said plurality of transistors,

wherein said wiring comprises a transparent conductive material including at least one of conductive ZnO doped or undoped with group III elements, group VII elements, group I elements and group V elements, a transparent conductor comprising at least one of ~~In2O3, SnO2 and (In-Sn)Ox~~ $\underline{In_2O_3, SnO_2 \text{ and } (In\text{-}Sn)O_x}$, or a un-transparent electrode material.

15. (Currently amended) A semiconductor device, comprising:

the transistor according to claim 7; and

an inductor comprising a transparent conductive material, said transparent conductive material comprising at least one of conductive ZnO doped or undoped with group III elements, group VII elements, group I elements and group V elements, and a transparent conductor comprising at least one of ~~In2O3, SnO2 and (In-Sn)Ox~~ $\underline{In_2O_3, SnO_2 \text{ and } (In\text{-}Sn)O_x}$.

16. (Previously presented) A semiconductor device, wherein a plurality of the semiconductor devices according to claim 8 are arranged in a matrix shape, and a capacitor or a light emission portion is driven by each transistor.

17. (Previously presented) A semiconductor device, wherein a plurality of the

semiconductor devices according to claim 9 are arranged in a matrix shape, and a capacitor or a light emission portion is driven by each transistor.

18. (Currently amended) A method of making a transistor, comprising:

depositing an emitter, [[and]] a collector, [[or]] and a base, wherein ~~said emitter and said collector, or said base are made of a transparent~~ said emitter, said collector and said base are selected from the group consisting of:

(a) an emitter and a collector made of a transparent n-type semiconductor, and a base made of a transparent p-type semiconductor, and

(b) a base made of a transparent n-type semiconductor, and an emitter and a collector made of a transparent p-type semiconductor,

said n-type semiconductor comprising any one of ZnO, zinc magnesium oxide ~~MgxZn1-xO~~ $Mg_xZn_{1-x}O$, zinc cadmium oxide ~~CdxZn1-xO~~ $Cd_xZn_{1-x}O$, and cadmium oxide CdO, and said n-type semiconductor is doped with group III elements or group VII elements;

depositing a base, [[or]] an emitter and a collector, wherein said base, or said emitter and said collector are made of a transparent p-type semiconductor comprising at least one of ZnO, zinc magnesium oxide ~~MgxZn1-xO~~ $Mg_xZn_{1-x}O$, zinc cadmium oxide ~~CdxZn1-xO~~ $Cd_xZn_{1-x}O$, and cadmium oxide CdO, said p-type semiconductor doped with group I elements or group V elements; and

depositing a base electrode, an emitter electrode and a collector electrode, wherein said base electrode, said emitter electrode and said collector electrode comprise a transparent conductive material comprising conductive ZnO doped or undoped with any one of group III elements, group VII elements and group I elements, or a transparent conductive material comprising at least one of ~~In2O3, SnO2 and (In-Sn)Ox~~ In_2O_3, SnO_2 and $(In-Sn)O_x$, or an un-transparent electrode material

and

wherein said base electrode, said emitter electrode and said collector electrode are respectively formed on said base, said emitter, and said collector.

19. (Previously presented) The transistor of claim 7, wherein said transparent n-type semiconductor includes at least conductive ZnO doped with group III elements or group VII elements.

20. (Previously presented) The transistor of claim 7, wherein said transparent p-type semiconductor includes at least conductive ZnO doped with group I elements or group V elements.

21. (Previously presented) The transistor of claim 7, wherein said transparent conductive material includes at least one conductive ZnO undoped and conductive ZnO doped with at least one of group III elements, group VII elements, and group I elements.

22. (Currently amended) The transistor of claim 7, wherein said transparent conductive material includes at least one of ~~In2O3, SnO2 and (In-Sn)Ox~~ In_2O_3, SnO_2 and $(In\text{-}Sn)O_x$.

23. (Previously presented) The transistor of claim 7, wherein said base is made of a transparent n-type semiconductor.

24. (Previously presented) The transistor of claim 7, wherein said base is made of a transparent p-type semiconductor.

25. (Previously presented) The method of claim 18, wherein said transparent n-type semiconductor includes at least conductive ZnO doped with group III elements or group VII elements.

26. (Previously presented) The method of claim 18, wherein said transparent p-type semiconductor includes at least conductive ZnO doped with group I elements or group V elements.

27. (Previously presented) The method of claim 18, wherein said transparent conductive material includes at least one of conductive ZnO undoped and conductive ZnO doped with any one of group III elements, group VII elements and group I elements.

28. (Currently amended) The method of claim 18, wherein said transparent conductive material includes at least one of ~~In2O3, SnO2 and (In-Sn)Ox~~ In_2O_3, SnO_2 and $(In\text{-}Sn)O_x$.

29. (Previously presented) The method of claim 18, wherein said base is made of a transparent n-type semiconductor.

30. (Previously presented) The method of claim 18, wherein said base is made of a transparent p-type semiconductor.

31. (Currently amended) A method of making a transistor, comprising:

providing an emitter and a collector, or a base, wherein ~~said emitter and said collector, or said base are made of a transparent~~ said emitter, said collector and said base are selected from

the group consisting of:

(a) an emitter and a collector made of a transparent n-type semiconductor, and a base made of a transparent p-type semiconductor, and

(b) a base made of a transparent n-type semiconductor, and an emitter and a collector made of a transparent p-type semiconductor,

said n-type semiconductor comprising at least one of ZnO, zinc magnesium oxide ~~MgxZn1-xO~~ $Mg_xZn_{1-x}O$, zinc cadmium oxide ~~CdxZn1-xO~~ $Cd_xZn_{1-x}O$, and cadmium oxide CdO, and said n-type semiconductor is doped with at least one of group III elements and group VII elements;

providing a base, or an emitter and a collector, wherein said base, or said emitter and said collector are made of a transparent p-type semiconductor comprising at least one of zinc oxide ZnO, zinc magnesium oxide ~~MgxZn1-xO~~ $Mg_xZn_{1-x}O$, zinc cadmium oxide ~~CdxZn1-xO~~ $Cd_xZn_{1-x}O$, and cadmium oxide CdO, and said p-type semiconductor is doped at least one of with group I elements and group V elements; and

providing a base electrode, an emitter electrode, and a collector electrode;

wherein said base electrode, said emitter electrode, and said collector electrode respectively are formed on said base, said emitter, and said collector;

wherein said base electrode, said emitter electrode, and said collector electrode comprise:

(1) a transparent conductive material comprising conductive ZnO that is undoped and conductive ZnO that is doped with at least one of group III elements, group VII elements, and group I elements; or

(2) a transparent conductor comprising at least one of ~~In2O3, SnO2 and (In-Sn)Ox~~ In_2O_3, SnO_2 and $(In\text{-}Sn)O_x$; or

(3) an un-transparent electrode material.

32. (Currently amended) A method of using a transistor, said transistor comprising:

an emitter and a collector, or a base, wherein ~~said emitter and said collector, or said base are made of a transparent~~ said emitter, said collector and said base are selected from the group consisting of:

(a) an emitter and a collector made of a transparent n-type semiconductor, and a base made of a transparent p-type semiconductor, and

(b) a base made of a transparent n-type semiconductor, and an emitter and a collector made of a

transparent p-type semiconductor,

said n-type semiconductor comprising any one of zinc oxide ZnO, zinc magnesium oxide ~~MgxZn1-xO~~ $Mg_xZn_{1-x}O$, zinc cadmium oxide ~~CdxZn1-xO~~ $Cd_xZn_{1-x}O$, and cadmium oxide CdO, and said n-type semiconductor is doped with at least one of group III elements and group VII elements; or

a base, or an emitter and a collector, wherein said base, or said emitter and said collector are made of a transparent p-type semiconductor comprising any one of zinc oxide ZnO, zinc magnesium oxide ~~MgxZn1-xO~~ $Mg_xZn_{1-x}O$, zinc cadmium oxide ~~CdxZn1-xO~~ $Cd_xZn_{1-x}O$, and cadmium oxide CdO, and said p-type semiconductor is doped with at least one of group I elements and group V elements;

a base electrode, an emitter electrode, and a collector electrode;

wherein said base electrode, said emitter electrode, and the collector electrode are respectively formed on said base, said emitter, and said collector;

wherein said base electrode, said emitter electrode, and said collector electrode comprise:

(1) a transparent conductive material comprising one of conductive ZnO that is undoped and conductive ZnO that is doped with at least one of group III elements, group VII elements, and group I elements; or

(2) a transparent conductor comprising at least one of ~~In2O3, SnO2 and (In-Sn)Ox~~ In_2O_3, SnO_2 and $(In\text{-}Sn)O_x$, or

(3) an un-transparent electrode material; and

said method comprising applying a voltage across at least one electrode of said transistor.

33. (Currently amended) A transistor, comprising:

~~an emitter and a collector, or a base made of a transparent n-type semiconductor~~ an emitter, a collector and a base made of a transparent n-type semiconductor selected from the group consisting of:

(a) an emitter and a collector made of a transparent n-type semiconductor, and a base made of a transparent p-type semiconductor, and

(b) a base made of a transparent n-type semiconductor, and an emitter and a collector made of a transparent p-type semiconductor,

said transparent n-type semiconductor comprising at least one of zinc oxide ZnO, zinc

magnesium oxide ~~MgxZn1-xO~~ $Mg_xZn_{1-x}O$, zinc cadmium oxide ~~CdxZn1-xO~~ $Cd_xZn_{1-x}O$, and cadmium oxide CdO, and said transparent n-type semiconductor is doped with at least one of group III elements and group VII elements;

a base, or an emitter and a collector made of a transparent p-type semiconductor, said transparent p-type semiconductor comprising any one of zinc oxide ZnO, zinc magnesium oxide ~~MgxZn1-xO~~ $Mg_xZn_{1-x}O$, zinc cadmium oxide ~~CdxZn1-xO~~ $Cd_xZn_{1-x}O$, and cadmium oxide CdO, and said transparent p-type semiconductor is doped with at least one of group I elements and group V elements; and

a base electrode, an emitter electrode, and a collector electrode;

wherein said base electrode, said emitter electrode, and said collector electrode are respectively formed on said base, said emitter, and said collector; and

wherein said base electrode, said emitter electrode, and said collector electrode comprise:

(1) a transparent conductive material comprising one of conductive ZnO that is un-doped and conductive ZnO that is doped with at least one of group III elements, group VII elements, and group I elements; or

(2) a transparent conductor comprising at least one of ~~In2O3, SnO2 and (In-Sn)Ox~~ In_2O_3, SnO_2 and $(In-Sn)O_x$; or

(3) an un-transparent electrode material.